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**From:** Maraldo, Dean [Maraldo.Dean@epa.gov]  
**Sent:** 6/14/2018 2:19:44 PM  
**To:** Wroble, Amanda [wroble.amanda@epa.gov]  
**CC:** Burdett, Cheryl [burdett.cheryl@epa.gov]; Thompson, Robert A. [Thompson.Robert@epa.gov]; Awanya, Francis [awanya.francis@epa.gov]; Schupp, George [schupp.george@epa.gov]  
**Subject:** RE: CSD N-N Samples

Yes, I think that would be important to mention. Thanks.

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**From:** Wroble, Amanda  
**Sent:** Thursday, June 14, 2018 9:16 AM  
**To:** Maraldo, Dean <Maraldo.Dean@epa.gov>  
**Cc:** Burdett, Cheryl <burdett.cheryl@epa.gov>; Thompson, Robert A. <Thompson.Robert@epa.gov>; Awanya, Francis <awanya.francis@epa.gov>; Schupp, George <schupp.george@epa.gov>  
**Subject:** RE: CSD N-N Samples

Cheryl should have already received the final nitrate-nitrite data. I took a look at the narrative that went out with the data, and the over-preservation issue was not mentioned. It is possible that the narrative could be amended if this is how you would like us to proceed.

Thanks,  
Amanda

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**From:** Maraldo, Dean  
**Sent:** Thursday, June 14, 2018 9:02 AM  
**To:** Wroble, Amanda <wroble.amanda@epa.gov>  
**Cc:** Burdett, Cheryl <burdett.cheryl@epa.gov>  
**Subject:** RE: CSD N-N Samples

Amanda: I assume the final data report for the nitrate-nitrite samples will address the over-preservation issue and/or flag the samples in some way. Same for sample A2a? Thanks.

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**From:** Wroble, Amanda  
**Sent:** Wednesday, June 13, 2018 2:44 PM  
**To:** Maraldo, Dean <Maraldo.Dean@epa.gov>  
**Cc:** Burdett, Cheryl <burdett.cheryl@epa.gov>; Bahr, Ryan <bahr.ryan@epa.gov>; Thompson, Robert A. <Thompson.Robert@epa.gov>; Schupp, George <schupp.george@epa.gov>; Persoon, Carolyn <persoon.carolyn@epa.gov>; Awanya, Francis <awanya.francis@epa.gov>  
**Subject:** RE: CSD N-N Samples

Dean,

The sample in question (A2a) was re-run today for nitrate-nitrite and gave a similar result as before. As a note, the unpreserved sample from the same location that was analyzed for anions by EPA 300.0 showed a non-detect for nitrate, which leads us to believe that there was some sort of nitrate contamination (using a contaminated transfer pipet for sample preservation, switching up bottle lids, etc) present in the preserved sample.

Regarding the over-preservation issue, the University of Nebraska would not have seen any interference due to over-preservation because their samples were frozen not sulfuric acid preserved. It could be expected that the results for the university might be slightly higher than CRL's results due to the fact that analysis of the frozen samples would actually

measure both nitrate and nitrite, whereas the results for sulfuric acid preserved samples would only measure nitrate. This would not have caused the discrepancy between results that we have been discussing though.

Please let me know if there is anything further you would like from us.

Thanks,  
Amanda

Amanda Wroble, Ph.D.  
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USEPA Region 5 Chicago Regional Laboratory  
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(312) 353-0375

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**From:** Wroble, Amanda  
**Sent:** Wednesday, June 13, 2018 8:08 AM  
**To:** Maraldo, Dean <Maraldo.Dean@epa.gov>  
**Cc:** Burdett, Cheryl <burdett.cheryl@epa.gov>; Bahr, Ryan <bahr.ryan@epa.gov>; Thompson, Robert A. <Thompson.Robert@epa.gov>; Schupp, George <schupp.george@epa.gov>; Persoon, Carolyn <persoon.carolyn@epa.gov>; Awanya, Francis <awanya.francis@epa.gov>  
**Subject:** RE: CSD N-N Samples

Dean,

I spoke with one of the analysts that is familiar with the NO3-NO2 analysis, and he said that the main factor that would have caused the discrepancy between CRL and University of Nebraska results was over-preservation of the samples we received at CRL. (We have previously seen issues with NH3 and NO3-NO2 results in CAFO samples that were over-preserved.) In this case, reanalysis of the existing samples wouldn't be worth it, as over-preservation would still be an issue. Resampling of the samples in question would be the better option. We would still like to take a look at the university's SOP if possible.

Thanks,  
Amanda

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**From:** Maraldo, Dean  
**Sent:** Tuesday, June 12, 2018 3:41 PM  
**To:** Wroble, Amanda <wroble.amanda@epa.gov>; Thompson, Robert A. <Thompson.Robert@epa.gov>  
**Cc:** Burdett, Cheryl <burdett.cheryl@epa.gov>; Bahr, Ryan <bahr.ryan@epa.gov>  
**Subject:** RE: CSD N-N Samples

I'll see what I can do. We also have the Hach Test strip results. I can get you the info on those to. Thanks.

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Dean Maraldo  
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U.S. EPA - Region 5

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**From:** Wroble, Amanda  
**Sent:** Tuesday, June 12, 2018 3:38 PM  
**To:** Maraldo, Dean <[Maraldo.Dean@epa.gov](mailto:Maraldo.Dean@epa.gov)>; Thompson, Robert A. <[Thompson.Robert@epa.gov](mailto:Thompson.Robert@epa.gov)>  
**Cc:** Burdett, Cheryl <[burdett.cheryl@epa.gov](mailto:burdett.cheryl@epa.gov)>; Bahr, Ryan <[bahr.ryan@epa.gov](mailto:bahr.ryan@epa.gov)>  
**Subject:** RE: CSD N-N Samples

Dean,

Is it possible to get a copy of the SOP(s) that were used by the university and lab report just to make sure we are comparing apples to apples?

Thanks,  
Amanda

Amanda Wroble, Ph.D.  
Metals Chemist and Group Leader  
USEPA Region 5 Chicago Regional Laboratory  
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**From:** Maraldo, Dean  
**Sent:** Tuesday, June 12, 2018 3:13 PM  
**To:** Wroble, Amanda <[wroble.amanda@epa.gov](mailto:wroble.amanda@epa.gov)>; Thompson, Robert A. <[Thompson.Robert@epa.gov](mailto:Thompson.Robert@epa.gov)>  
**Cc:** Burdett, Cheryl <[burdett.cheryl@epa.gov](mailto:burdett.cheryl@epa.gov)>; Bahr, Ryan <[bahr.ryan@epa.gov](mailto:bahr.ryan@epa.gov)>  
**Subject:** CSD N-N Samples

Amanda: as discussed, please see the list of CSD sample results below. We found some discrepancies in the preliminary Nitrate\_Nitrite data when compared to field results, and results from the University of Nebraska lab from the same samples (we sent split samples to Nebraska for NO3\_NO2 analysis). Would it be possible to re-analyze the list of samples below for Nitrate-Nitrite, with the understanding that the hold time is exceeded?

We are trying to determine the source of the discrepancies. If you come up with any other possible reasons for the discrepancies please let us know.

SampleID	Nitrate FieldTest (mg/l)	Univ of Nebraska NO3_NO2_N (mg/l)	CRL_Nitrate_Nitrite Preliminary Result (mg/l)	Notes
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A2a	0	0	36.9	Discrepancy between CRL preliminary result and field and Univ of Nebraska results
D6a	50	41.14	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results
D6b	50	24.537	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results

D7a	50	30.701	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results
D7a Dup	50	NA	33.7	CRL sig difference compared to duplicate sample

D8b	50	39.01	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results
D9a	20	30.252	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results

D10a	20	8.794	14.3	CRL sig difference compared to duplicate sample
D10a Dup	20	NA	0.05	CRL sig difference compared to duplicate sample

D10b	20	8.403	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results; CRL sig difference compared to duplicate sample
D10b Dup	20	NA	16.2	CRL sig difference compared to duplicate sample

E7a	20	16.13	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results
E7b	50	13.811	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results
E8a	20	28.579	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results
E8b	50	21.058	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results
E9a	10	20.791	0.05	Discrepancy between CRL preliminary result and field and Univ of Nebraska results

Thanks,  
Dean

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